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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,091	10/01/2001	Massimo Grasso	IR-1951 (2-2472)	4728

2352 7590 11/07/2003

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EXAMINER

CUNNINGHAM, TERRY D

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,091

Applicant(s)

GRASSO ET AL.

Examiner

Terry D. Cunningham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Summary of changes in this action

1. The amendment has overcome the indefiniteness rejections concerning the “gating device”.
2. With respect to the rejection to claims 17 and 20 concerning the “high” and “low side driving circuits”. This was a typographical error and should have referred to the “high” and “low side circuitry”. However, Examiner reconsidered this rejection. The claims clearly state that the “high” and “low side circuitry” is for driving the respective “power devices” and further states that the “power devices” are “connected in a half bridges”. Examiner finds this to be sufficient cooperation between the elements.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-27 are rejected under 35 U.S.C. §102(b) as being anticipated by newly cited art to Masui (USPN 5,852,538). Masui discloses, in Fig. 1, a circuit comprising: “a driving circuit (3,4)”; “a power device (6)”; “sensing circuitry (1, 2, 14-16 and 17) for providing a sense signal (output of 2)” having “a comparator (9)”; “a gating device (8)”; and “correction circuitry (remainder of circuit)”, all connected and operating similarly as recited by Applicant.

As seen, when spurious information is at node C, such will be removed by the remainder of the circuit.

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With respect to claims 3 and 11, it is notoriously well known that a IGBT (such as 6) includes and FET and a bipolar transistor.

With respect to claims 17-27, clearly any number of the circuits shown in Fig. 1 of Masui (e.g., 2) could be used to drive any number of "power devices" (e.g., a "high side" and a "low side").

With respect to claims 23-27, the reference clearly discloses that such removes negative spikes.

Examiner has fully considered Applicant's remarks for the above rejection and has not found them to be persuasive. Applicant states that "diode 8 detects information relative to the operation of the power IGBT 6 and transfers its output directly to the comparator 9". The claims do not discuss whether or not the "information" is provided to any intervening element. The claims states that the "sense input signal" includes the "information" and that the "correction circuitry" prevents the "sense input signal from including spurious information received from the power device". Firstly, it is clear that in the reference to Masui that when a high frequency noise is at node C, capacitor 11 must inherent remove the high frequency aspect. And secondly, lines 46-56 of Col. 3 of Masui expressly discuss how the circuit prevents an "abnormality" from being provided to the output of the sense circuitry. This operation would clearly be seen to meet the claimed operation.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 703-308-4872. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.

TC
November 5, 2003


Terry D. Cunningham
Primary Examiner
Art Unit 2816